PERMIT TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

GENERAL

1. In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

UNITED STATES STEEL CORPORATION

is authorized to discharge from a facility located at

Gary Works
One North Broadway
Gary, Indiana

to receiving waters named

Grand Calumet River: Discharges 002, 007, 010, 015, 017, 018, 019, 020, 021, 028, 030, 032, 033, and 034
Lake Michigan: Discharges 035, 036, 037, 038, and 039

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts 1 through 30 hereof.

2. This permit shall become effective on

3. This permit and the authorization to discharge shall expire at midnight, October 31, 1979

4. Signed this 25th day of June, 1976.

A. H. Manzardo

Acting Director, Enforcement Division
U.S. Environmental Protection Agency
Region V

MONITORING AND REPORTING

5. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

6. Reporting

Monitoring results obtained during the previous one month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on April 28, 1976. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

United States Environmental Protection Agency
Region V, Enforcement Division
230 South Dearborn
Chicago, Illinois 60604
Attn: Chief, Compliance Section

Indiana Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, Indiana 46206

7. Definitions

a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

8. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

9. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The exact place, date, and time of sampling;

b. The date the analyses were performed;

c. The person(s) who performed the analyses;

d. The analytical techniques or methods used; and

e. The results of all required analyses.

10. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

11. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State Water Pollution Control Agency.

MANAGEMENT REQUIREMENTS

12. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated or detected new or different discharges of pollutants must be reported to the Regional Administrator. Following such report, the permit may be modified to specify and limit any pollutants not previously limited.

13. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such conditions:

a. A description of the discharge and cause of noncompliance; and

b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

14. Facilities Operation

The permittee shall at all times maintain in good working order and operate at optimum efficiency all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

15. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

16. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or

(ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

17. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

18. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

a. In accordance with the Schedule of Compliance contained in Part 30 provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part 30,

b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

RESPONSIBILITIES

19. Right of Entry

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

20. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

21. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

22. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

23. Toxic Pollutants

See attached Agreement.

24. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part 16) and "Power Failures" (Part 18), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. This provision is subject to the attached agreement.

25. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

26. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

27. Property Rights and Other Liability

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights. Nothing in this permit shall obviate the necessity of obtaining State or local assent required by law for the discharge authorized herein.

28. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

29. Other Requirements

A. Notwithstanding any provision to the contrary elsewhere in this permit, the following conditions shall apply:

1. Solids, sludges, filter backwash, or other pollutants removed from or resulting from the treatment or control of wastewaters shall be disposed of in such manner as to be in compliance with all Indiana statutory provisions, regulations, and Stream Pollution Control Board policies relative to refuse and/or solid waste disposal.

2. The permittee shall submit two reports to the State agency every month. The first report will be the Indiana State Board of Health monthly reporting form, the second form will be the EPA Form 3320-1. These should be submitted by the 15th day of the following month.

3. Preliminary plans and specifications and final plans and specifications pursuant to the Schedule of Compliance, shall be submitted to the State agency for approval.

This permit shall be subject to an agreement between United States Steel Corporation and United States Environmental Protection Agency attached hereto.

B. Intake Structures

Within thirty (30) days of the receipt of the permit and the determination of the Regional Administrator, the permittee shall submit to the Regional Administrator and the Indiana Stream Pollution Control Board for approval the design for an intake monitoring program to document the effects of the present intake on the various species and life stages of fish. Such a monitoring program shall include, but not be limited to, a tabulation of all fish trapped by the present intake structure. This tabulation shall be performed every fourth day unless the permittee justifies some alternative schedule to the Regional Administrator and the Indiana Stream Pollution Control Board within thirty (30) days after the receipt of the permit and determination of the Regional Administrator. The tabulation shall begin within sixty (60) days after the receipt of the permit and determination of the Regional Administrator and end within twelve (12) months of the commencement of tabulation and shall include the number, weight, length, and species of each fish entrapped. Such monitoring data shall be submitted quarterly with other reports.

The permittee shall submit a final report to the Regional Administrator and to the Indiana Stream Pollution Control Board by no later than December 31, 1976 providing proposals for measures to be taken by the permittee to meet the requirements of Section 316(b) of the Act for the best cooling-water intake technology available. Development of the report shall be guided by the "Development Document for Best Technology Available for Minimizing Adverse Environmental Impact for Cooling Water Intake Structures", as proposed by the US EPA, and the "Lake Michigan Intake Report on the Best Available Technology", by Lake Michigan cooling water intake technical committee, August 1973.

The report shall be evaluated with regard to Section 316(b) of the Act. As a result of this evaluation, the Regional Administrator may modify the permit in accordance with Part 22 of this permit to establish an implementation schedule to insure compliance with Section 316(b).

C. SUPPLEMENTAL DATA REQUIRED FOR EVALUATION OF WELL DISPOSAL

a. An accurate plat showing location and surface elevation of injection well site, surface features, property boundaries, and surface and mineral ownership at an approved scale.

b. Maps indicating location of water wells and all other wells, mines or artificial penetrations, including but not limited to oil and gas wells and exploratory or test wells, showing depths, elevations and the deepest formation penetrated within twice the calculated zone of influence of the project. Plugging and abandonment records for all oil and gas tests, and water wells should accompany the map.

c. Maps indicating vertical and lateral limits of potable water supplies which would include both short and long-term variations in surface water supplies and subsurface aquifers containing water with less than 10,000 mg/l total dissolved solids. Available amounts and present and potential uses of these waters, as well as projections of public water supply requirements must be considered.

d. Descriptions of mineral resources present or believed to be present in area of project and the effect of this project on present or potential mineral resources in the area.

e. Maps and cross sections at approved scales illustrating detailed geologic structure and a stratigraphic section (including formations, lithology, and physical characteristics) for the local area, and generalized maps and cross sections illustrating the regional geologic setting of the project.

f. Description of chemical, physical, and biological properties and characteristics of the fluids injected.

g. Potentiometric maps at approved scales and isopleth intervals of the injection horizon and of those aquifers immediately above and below the injection horizon, with copies of all drill-stem test charts, extrapolations, and data used in compiling such maps.

h. Description of the location and nature of present or potentially useable minerals from the zone of influence.

i. Volume, rate and injection pressure of the fluid.

j. The following geological and physical characteristics of the injection interval and the overlying and underlying impermeable barriers should be determined and submitted:

1. Thickness;
2. areal extent;
3. lithology;
4. grain mineralogy;
5. type and mineralogy of matrix;
6. clay content;
7. clay mineralogy;
8. effective porosity (including an explanation of how determined);
9. permeability (including an explanation of how determined);
10. coefficient of aquifer storage;
11. amount and extent of natural fracturing;
12. location, extent, and effects of known or suspected faulting indicating whether faults are sealed, or fractured avenues for fluid movement;
13. extent and effects of natural solution channels;
14. degree of fluid saturation;
15. formation fluid chemistry (including local and regional variations);
16. temperature of formation (including an explanation of how determined);
17. formation and fluid pressure (including original and modifications resulting from fluid withdrawal or injection);
18. fracturing gradients;
19. diffusion and dispersion characteristics of the waste and the formation fluid including effect of gravity segregation;
20. compatibility of injected waste with the physical, chemical, and biological characteristics of the reservoir, and;
21. injectivity profiles.

k. The following engineering data should be supplied:

1. Diameter of hole and total depth of well;
2. type, size, weight, and strength of all surface, intermediate, and injection casing strings;
3. specifications and installation of tubing and packers;
4. cementing procedure and type of cement;
5. coring program;
6. formation testing program;
7. logging program;
8. artificial fracturing or stimulating program;
9. injection procedure;
10. plans of the surface and subsurface construction details of the system including engineering drawings and specifications of the system (including but not limited to pumps, well head construction, and casing depth);

11. plans for monitoring including a multi-point fluid pressure monitoring system constructed to monitor pressures above as well as within the injection zones; and description of annular fluid;
12. expected changes in pressure, rate of native fluid displacement by injected fluid, directions of dispersion and zone affected by the project;
13. contingency plans to cope with all shut-ins or well failures in a manner that will obviate any environmental degradation.

1. Preparation of a report thoroughly investigating the effects of the subsurface injection well is a prerequisite for evaluation of a project. Such a statement should include a thorough assessment of: 1) the environmental protection; 2) projection of fluid pressure response with time both in the injection zones and overlying formations, with particular attention to aquifers which may be used for fresh water supplies in the future; and 3) problems associated with possible chemical interactions between injected wastes, formation fluids, and mineralogical constituents.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 002 (GW-1)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	-	Continuous	Measurement Recorded
Suspended Solids	-	-	25 mg/l	50 mg/l	Weekly	24 hour composite
Oil & Grease***	-	-	-	10 mg/l	Weekly	3 grabs/24 hours
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
*Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite

***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 002 (GW-1)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	**	Continuous	Measurement Recorded
Suspended Solids	-	-	25 mg/l	50 mg/l	Weekly	24 hour composite
Oil & Grease***	-	-	-	10 mg/l	Weekly	3 grabs/24 hours
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite

*See page 51 for load limitations.
**See page 52 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 007 (GW-2)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	5/8 days	One measurement
Temperature	-	-	-	-	5/8 days	One measurement
Suspended Solids	-	-	26 mg/l	54 mg/l	5/8 days	Grab
Oil and Grease	-	-	-	10 mg/l	5/8 days	Grab
Ammonia	228 (504)	456 (1008)	-	-	5/8 days	Grab
Cyanide	-	-	0.15 mg/l	0.4 mg/l	5/8 days	Grab
Phenol	10.9 (24.1)	22.5 (49.65)	-	-	5/8 days	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 5 days in 8 days by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 007 (GW-2)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements	
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	**	Daily	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 Grabs/24 Hours
Ammonia	*	*	-	-	Daily	24 hour composite
Cyanide	*	*	-	-	Daily	24 hour composite
Phenol	*	*	-	-	Daily	24 hour composite
*Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Daily	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously recorded.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 4.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 010 (GW-3)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	-	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
*Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 4.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 010 (GW-3)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 50 for load limitations.
**See page 52 for thermal limitations.
****See page 53 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at Pumping Station No. 4.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL) Permit No. IN 0000281

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 015 (GW-4)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)			
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Weekly	Grab
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	-	-	-	-	Weekly	Grab
Cyanide	-	-	-	-	Weekly	Grab
Phenol	-	-	-	-	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 015 (GW-4)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 4.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 017 (GW-5).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	5/8 days	One measurement
Temperature	-	-	-	-	5/8 days	One measurement
Suspended Solids	13,182 (29,000)	26,364 (58,000)	-	-	5/8 days	Grab
Oil and Grease	-	-	-	10 mg/l	5/8 days	Grab
Ammonia	-	-	6.0 mg/l	18 mg/l	5/8 days	Grab
Cyanide	-	-	9.3 mg/l	27.9 mg/l	5/8 days	Grab
Phenol	-	-	0.39 mg/l	1.17 mg/l	5/8 days	Grab
*Zinc	-	-	-	-	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 5 days in 8 days by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INTERIM)

During the period beginning July 1, 1977 and lasting through June 30, 1979 the permittee is authorized to discharge from outfall(s) serial number(s) 017 (GW-5).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate Recorded
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	767(1688)	1150(2532)	-	-	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 Grabs/24 hours
Ammonia	*	*	-	-	Daily	24 hour composite
Cyanide	*	*	-	-	Daily	24 hour composite
Phenol	*	*	-	-	Daily	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Zinc	-	-	-	-	Weekly	Grab

*See page 51 for load limitations.
**See page 53 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously recorded.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning July 1, 1979 ( ) and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 017 (GW-5).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate Recorded
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	227 (500)	340 (750)	-	-	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 Grabs/24 hours
Ammonia	*	*	-	-	Daily	24 hour composite
Cyanide	*	*	-	-	Daily	24 hour composite
Phenol	*	*	-	-	Daily	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Zinc	-	-	-	-	Weekly	Grab

*See page 51 for load limitations.
**See page 53 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously recorded.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 018 (GW-6)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids			30 mg/l	60 mg/l	Weekly	Grab
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	-	-	-	-	Weekly	Grab
Cyanide	-	-	-	-	Weekly	Grab
Phenol	-	-	-	-	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 018 (GW-6)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Phloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 019 (GW-7)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	-	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil & Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 019 (GW-7)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
**** Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
* Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solidss(intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 020 (GW-7A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements	
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	-	Daily	One measurement
Suspended Solids	-	-	25 mg/l	50 mg/l	Daily	24 hour composite
Oil & Grease***	-	-	-	10 mg/l	Daily	3 grabs/24 hours
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite

***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 020 (GW-7A).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	-	-	25 mg/l	50 mg/l	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 Grabs/24 hours
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite

*See page 5j for load limitations.
**See page 5j for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977. the permittee is authorized to discharge from outfall(s) serial number(s) 021 (GW-9).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements	
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids	-	-	-	-	Weekly	Grab
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date, the permittee is authorized to discharge from outfall(s) serial number(s) 021 (GW-9)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max.	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	**	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 028 (GW-10A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	-	Daily	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Daily	24 hour composite
Oil & Grease***	-	-	-	10 mg/l	Daily	3 grabs/24 hours
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite

***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 028 (GW-10A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)			
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 Grabs/24 hours
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite

*See page 51 for load limitations
**See page 53 for thermal limitations;
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 030 (GW-11A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	-	Daily	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Daily	24 hour composite
Oil & Grease***	-	-	-	10 mg/l	Daily	3 grabs/24 hours
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite

***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 030 (GW-11A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Daily	24 hour total
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Daily	24 hour composite
Oil & Grease***	-	-	-	10. mg/l	Daily	3 grabs/24 hours
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
*** The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 032 (GW-13)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day) Daily Avg	Daily Max.	Other Units (Specify) Daily Avg	Daily Max	Monitoring Requirements Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	-	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	-	-	-	-	Weekly	24 hour composite
Cyanide	-	-	-	-	Weekly	24 hour composite
Phenol	-	-	-	-	Weekly	24 hour composite
Chloride	-	-	-	-	Monthly	24 hour composite
Sulfate	-	-	-	-	Monthly	24 hour composite
Fluoride	-	-	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

During the period beginning July 1, 1977 and lasting through the expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 032 (GW-13)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day) Daily Avg	Daily Max	Other Units (Specify) Daily Avg	Daily Max	Monitoring Requirements Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load loimitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

The intake water shall be monitored for suspended solids at pumping station No. 1.

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 033 (ST-14)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids	-	-	-	-	Weekly	Grab
Oil and Grease	-	-	-	-	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 033 (ST-14)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge, but prior to mixing with storm or other waters

The intake water shall be monitored for suspended solids at central pumping station.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977 the permittee is authorized to discharge from outfall(s) serial number(s) 034 (ST-17).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	5/8 days	One measurement
Temperature	-	-	-	-	5/8 days	One measurement
Suspended Solids	-	-	35 mg/l	70 mg/l	5/8 days	Grab
Oil and Grease	-	-	-	20 mg/l	5/8 days	Grab
Chromium	-	-	-	-	Weekly	Grab
Tin	-	-	-	-	Weekly	Grab
Zinc	-	-	-	-	Weekly	Grab
Phenol	-	-	-	-	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 5 days in eight days by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 034 (ST-17).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)			
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate recorded
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Daily	24 hour composite
Oil and Grease***	-	-	-	15 mg/l	Daily	3 grabs/24 hours
Zinc	-	-	0.1 mg/l	0.3 mg/l	Daily	24 hour composite
Chromium	-	-	0.1 mg/l	0.3 mg/l	Daily	24 hour composite
Tin	-	-	-	1.0 mg/l	Daily	24 hour composite
Ammonia	*	*	-	-	Weekly	24 hour composite
Cyanide	*	*	-	-	Weekly	24 hour composite
Phenol	*	*	-	-	Weekly	24 hour composite
Chloride	*	*	-	-	Monthly	24 hour composite
Sulfate	*	*	-	-	Monthly	24 hour composite
Fluoride	*	*	-	-	Monthly	24 hour composite

*See page 51 for load limitations.
**See page 53 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously recorded.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into the Grand Calumet River.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977 the permittee is authorized to discharge from outfall(s) serial number(s) 035 (GW-L-1)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate Recorded
Temperature	-	-	-	-	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10. mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

****See page 53 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at pumping stations Nos. 1 and 2.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 035 (GW-L-1).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate recorded
Temperature	-	-	-	**	Weekly	One measurement
**** Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at pumping stations Nos. 1 and 2.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 036 (GS-L-1A)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day) Daily Avg	Daily Max	Other Units (Specify) Daily Avg	Daily Max	Monitoring Requirements Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	-	Weekly	Orie measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at pumping station No. 2.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date, the permittee is authorized to discharge from outfall(s) serial number(s) 036 (GS-L-1A).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at pumping station No. 2.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 037 (ST-L-5)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Weekly	Grab
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into Lake Michigan.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 037 (ST-L-5)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

**See page 5 3 for thermal limitations.
****See page 5.4 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of each discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at central pumping station.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 038 (ST-L-2)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	One measurement
Temperature	-	-	-	-	Weekly	One measurement
Suspended Solids	-	-	30 mg/l	60 mg/l	Weekly	Grab
Oil and Grease	-	-	-	10. mg/l	Weekly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 038 (ST-L-2)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Discharge Limitations Other Units (Specify)		Monitoring Requirements Measurement Frequency	Monitoring Requirements Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Weekly	24 hour total
Temperature	-	-	-	**	Weekly	One measurement
****Suspended Solids (effluent)	-	-	15 mg/l	30 mg/l	Weekly	24 hour composite
Oil and Grease	-	-	-	10 mg/l	Weekly	Grab
Suspended Solids (intake)	-	-	-	-	Weekly	24 hour composite

**See page 53 for thermal limitations.
****See page 54 for alternate net limitations for suspended solids.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

The intake water shall be monitored for total suspended solids at central pumping station.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (INITIAL)

During the period beginning effective date and lasting through June 30, 1977
the permittee is authorized to discharge from outfall(s) serial number(s) 039 (ST-L-6)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	5/8 days	One measurement
Temperature	-	-	-	-	5/8 days	One measurement
Suspended Solids	-	-	35 mg/l	50 mg/l	5/8 days	Grab
Oil and Grease	-	-	-	10 mg/l	5/8 days	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five days in eight days by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 039 (ST-L-6).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m^3/Day (MGD)	—	—	—	—	Continuous	Rate recorded
Temperature	-	-	-	**	Daily	One measurement
Suspended Solids	-	-	25 mg/l	50 mg/l	Daily	24 hour composite
Oil and Grease***	-	-	-	10 mg/l	Daily	3 grabs/24 hours

**See page 53 for thermal limitations.
***The three grab samples shall be analyzed separately and the arithmetic mean reported.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam except where the permittee demonstrates that concentrations no greater than that which are found in the influent, where receiving water is the same source as influent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point representative of the discharge prior to entry into Lake Michigan.

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (FINAL)

During the period beginning July 1, 1977 and lasting through the expiration date, the permittee is authorized to discharge from outfalls numbers 002, 007, 010, 015, 017, 018, 019, 020, 021, 028, 030, 032, 033, and 034.

Such discharges shall be limited and monitored by the permittee as specified below: The total of the discharges from all of these outfalls shall not exceed the limitations specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)			
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow-m^3/Day (MGD)	-	-	-	-	For monitoring requirements see specific outfalls.	
Ammonia	978 (2150)	1960 (4300)	-	-		
Phenol	11.7 (25.76)	25.4 (51.52)	-	-		
Cyanide	49.8 (109.5)	99 (219)	-	-		
Chloride	18,190 (40,023)	36,300 (80,046)	-	-		
Sulfate	43,480 (95,660)	86,900 (191,320)	-	-		
Fluoride	1265 (2778)	2440 (5556)	-	-		

Additional limiting requirements for each of the above-referenced discharges are presented on pages 12 through 39 of this NPDES permit.

All appropriate intakes must be monitored at the same sampling frequency and sample type as specified for each outfall to determine net loadings. The permittee shall report the intake water loadings. Samples shall be taken at a point(s) representative of the intake(s).

30. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of the permit and lasting until the expiration date, the permittee is authorized to discharge to deepwell(s) serial number(s) IN-9.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	***** DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
	Daily Min.	Daily Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow-M^3/Day (MGD)	-	-	-	Continuous	Rate Recorded
Injection Pressure	-	-	-	Continuous	Press. Recorded
Annular Pressure	-	-	-	Continuous	Press. Recorded
Temperature	-	-	-	Continuous	Temp. Recorded
pH (units)	-	-	-	Continuous	Unit Recorded
Chromium	-	-	-	Daily	24 hour composite
Iron (total)	-	-	-	Daily	24 hour composite
Iron (dissolved)	-	-	-	Daily	24 hour composite
Sulfate	-	-	-	Daily	24 hour composite
Chloride	-	-	-	Daily	24 hour composite

*****The disposal to the deep well is limited to the current discharge.

30. THERMAL LIMITATIONS (FINAL)

a. Thermal Limitations for Outfalls 002, 007, 010, 015, 017, 018, 019, 020, 021, 028, 030, 032, 033, and 034

The temperature of the effluent shall not cause the receiving water outside the zone of admixture to exceed the following temperature limitations:

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
°F	60	60	60	90	90	90	90	90	90	60	60	60
°C	15.5	15.5	15.5	32.2	32.2	32.2	32.2	32.2	32.2	15.5	15.5	15.5

They are applicable at any point in the stream except for areas immediately adjacent to outfalls. In such areas cognizance will be given to the opportunities for the admixture of waste effluents with the receiving water.

b. Thermal Limitations for Outfalls 035, 036, 037, 038, and 039

At any time and at a maximum distance of 1000 feet from a fixed point adjacent to the discharge and/or as agreed upon by the State and Federal regulatory agencies, the receiving water temperature shall not be more than 3 degrees Fahrenheit above the existing natural water nor shall the maximum temperature exceed those listed below, whichever is lower. Temperature shall be continuously measured and recorded at the point of discharge. In addition, the temperature shall be monitored every six months at a distance of 1000 feet from the discharge point at a depth of one meter.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
°F	45	45	45	55	60	70	80	80	80	65	60	50
°C	7.2	7.2	7.2	12.8	15.5	21.1	26.6	26.6	26.6	18.3	15.5	10.0

Above thermal limitations must be met by July 1, 1977 unless the permittee makes a "Thermal Discharge Demonstration" in accordance with applicable regulations and that section of this permit.

THERMAL DISCHARGE DEMONSTRATION

The permittee may submit a plan of study by January 31, 1976 to show whether requirements of Regulation SPC 4-R and SPC 7R-2 of the Indiana Stream Pollution Control Board are more stringent than necessary to assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife on and in the receiving waters. Semi-annual interim reports will be submitted, and the study will be completed and a report submitted to the Regional Administrator and the Indiana Stream Pollution Control Board by no later than March 31, 1977.

Development of the demonstration shall be guided by the "Guidelines for Administration of the 316(a) Regulations" as promulgated by the U.S. EPA and those regulations published in 39 Federal Register 196 (October 8, 1974) on pages 36176-84, known as 40 CFR 122. All data and records associated with this study shall be retained in their entirety by the permittee and shall be made available subject to the request of the Regional Administrator and/or the Indiana Stream Pollution Control Board.

30. NON-CONTACT COOLING WATER LIMITATIONS

Discharges 007, 010, 015, 018, 019, 021, 032, 033, 035, 036, 037, and 038

The effluent discharge concentration for total suspended solids shall not exceed 15 mg/l gross as a daily average, or 30 mg/l gross as a daily maximum. In the event that the total suspended solids in the intake water exceed 10 mg/l as a daily average or 20 mg/l as a daily maximum, the effluent limitations shall be:

Daily Average	5 mg/l net
Daily Maximum	10 mg/l net

30. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

A. Outfalls 007, 015, 017, 018, 034, 037, 038,and 039

a)	Submit preliminary plans by	- January 31, 1976
b)	Submit final plans by	- March 31, 1976
c)	Start construction by	- June 30, 1976
d)	Submit progress report by	- October 31, 1976
e)	Submit progress report by	- February 29, 1977
f)	Complete construction by	- May 31, 1977
g)	Attain operational level by	- June 30, 1977

B. Outfalls 021 and 033

Eliminate all polluting sources by - December 31, 1975

These discharges are limited solely to non-contact cooling water starting January 1, 1976

30. SCHEDULE OF COMPLIANCE

C. Limitations for ammonia, cyanide, phenol, chloride, sulfate, and fluoride for Outfalls 002, 007, 010, 015,017, 018, 019, 020, 021, 028, 030, 032, 033, and 034

a)	Submit preliminary plans by	- January 31, 1976
b)	Submit final plans by	- March 31, 1976
c)	Start construction by	- June 30, 1976
d)	Submit progress report by	- October 31, 1976
e)	Submit progress report by	- February 29, 1977
f)	Complete construction by	- May 31, 1977
g)	Attain operational level by	- June 30, 1977

D. Thermal effluent limitations - All outfalls

a)	Submit preliminary plans by	- January 31, 1976
b)	Submit final plans by	- March 31, 1976
c)	Start construction by	- June 30, 1976
d)	Submit progress report by	- October 31, 1976
e)	Submit progress report by	- February 29, 1977
f)	Complete construction by	- May 31, 1977
g)	Attain operational level by	- June 30, 1977

30. SCHEDULE OF COMPLIANCE

E. Well Disposal

The permittee shall achieve compliance with the effluent requirements specified for the deep well in accordancewith the following schedule:

a. Submit (for the waste stream discharged to the well) an updated Corps of Engineers' application or a Standard Form C by January 28, 1976 .

b. Submit the data indicated in Part 29C of this permit Supplemental Data Required for Evaluation of Well Disposal, by January 28, 1976 .

c. Submit proposal for treatability studies for surface treatment of wastewater currently being discharged to well by January 28, 1976 .

d. Within 90 days after EPA acceptance of the preliminary treatability program, a treatability program will be submitted for EPA approval of the developmental aspects of the program. Modifications of the program can be submitted in the event new technology is discovered and becomes available.

e. After approval of the final treatability study by EPA, the applicant shall conduct the treatability study and verify the result by reasonable pilot plant operations. Regular reports of progress on the treatability study and/or pilot plant operations shall be submitted to EPA on a quarterly basis with the first report due after passage of the first full calendar quarter following final EPA approval of the treatability.

f. Treatability study and pilot plant operations shall be completed with a final report of results submitted to EPA by January 28, 1977.

g. After review of the above data, a determination will be made relative to the continued use of the well. The permit may be amended pursuant to this evaluation to reflect the results of the determination. Any party may request a hearing on the subject of this determination.

2. No later than 14 calendar days following a date identifed in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.